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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/617,386	07/11/2003	Taketoshi Nakano	1035-460	2910

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EXAMINER

SHENG, TOM Y

ART UNIT	PAPER NUMBER
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2629

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/03/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/617,386	NAKANO ET AL.	
	Examiner	Art Unit	
	Tom V. Sheng	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-8 and 10-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-8 and 10-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3, 6-8 and 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over De Lange (US 5,719,593) in view of Nakamura (JP 10-049058) and Taku (JP 2000-112435).

As for display apparatus claim 1 and associated display method claim 6 and claims 18-19, De Lange teaches a display apparatus (fig. 3) comprising:

an image display section (display 80; column 7, lines 1-22) for performing display of data written in the image display section (inherent), the data being held therein for a predetermined holding period (every full frame display inherently held for a duration of at least one frame time);

a full screen memory (frame buffer 60) for storing therein data of at least one frame for a whole display area (area 230; fig. 2a; corresponding to a background image; column 6, lines 8-38) of the image display section (frame buffer 60 inherently stores pixel data for the entire display 80);

the storing of data of at least one frame for a partial display area (area 220; fig. 2a) which has a refresh rate different from a refresh rate of the whole display area and has a scan size different from a scan size of the whole display area (The same frame buffer 60 stores both background/full and foreground/partial images independently.

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Moreover, the images may be refreshed at different rates depending on the nature of the images. Thus, it is understood that background image would be larger and would be able to use a slower refresh rate than required for the foreground image; column 11, lines 6-31);

an image-display-section refreshing section (video generator 70) for refreshing the data written in the image display section (as analyzed above, refreshing of background image);

a partial-display-area refreshing section (same video generator 70) for refreshing data written in the partial display area (refreshing of foreground image as analyzed above).

However, De Lange does not teach using a partial screen memory for storing frame data for the partial display area. Moreover, De Lange does not teach a control section for causing data read out from the respective memories, to be written into the display areas to which the data corresponds, and causing the partial display area to move to a predetermined position within a display screen of the image display section when a predetermined time lapses.

Nakamura teaches an image display control device. Specifically, Nakamura teaches a first storage means (memory) for storing whole image data and a second storage means (memory) for storing partial image data (page 1, paragraph 6).

Moreover, because of this arrangement, it becomes possible to either display just the original whole image or a whole image with the partial image (page 1, paragraph 7).

Therefore, it would have been obvious to one of ordinary skill to modify De Lange's single frame memory to full screen memory and partial screen memory due to the advantageous option in controlling the presence of a partial image in a whole image. Consequently, as modified, De Lange's video generator 70 corresponds to claimed control section by reading individually from the full screen memory and the partial screen memory and writing into the display areas to which the data corresponds. Still, De Lange as modified by Nakamura does not teach the control section for causing the partial display area to move to a predetermined position within a display screen of the image display section when a predetermined time lapses.

Taku teaches sector display in a LCD panel (drawings 3-5). Specifically, Taku teaches a controller 2 for controlling the display of sector display field D over time with signals PDY and CNT (paragraphs 25-31). Moreover, as time period passes, the position of the sector display field D changes (drawings 1-2 and paragraphs 23-24). These successive changes of a partial display provide interest (abstract) and naturally prevent any burn-in effect over time in LCD.

Therefore, it would have been obvious to one of ordinary skill in the art to enhance modified De Lange's display with a partial display that is movable over time. This is particularly advantageous in preventing any burn-in in an LCD over time.

As for claims 2, 3, 7 and 8, the movement of the partial display area, whether line-by-line or randomly, is just a variation of Taku's method as illustrated in drawing 1.

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3. Claims 5 and 10-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over De Lange (US 5,719,593) in view of Nakamura (JP 10-049058) and Kraft, IV (US 5,867,160).

As for display apparatus claim 5 and associated display method claim 10, De Lange teaches a display apparatus (fig. 3) comprising:

an image display section (display 80; column 7, lines 1-22) for performing display of data written in the image display section (inherent), the data being held therein for a predetermined holding period (every full frame display inherently held for a duration of at least one frame time);

a full screen memory (frame buffer 60) for storing therein data of at least one frame for a whole display area (area 230; fig. 2a; corresponding to a background image; column 6, lines 8-38) of the image display section (frame buffer 60 inherently stores pixel data for the entire display 80);

the storing of data of at least one frame for a partial display area (area 220; fig. 2a) which has a refresh rate different from a refresh rate of the whole display area and has a scan size different from a scan size of the whole display area (The same frame buffer 60 stores both background/full and foreground/partial images independently. Moreover, the images may be refreshed at different rates depending on the nature of the images. Thus, it is understood that background image would be larger and would be able to use a slower refresh rate than required for the foreground image; column 11, lines 6-31);

an image-display-section refreshing section (video generator 70) for refreshing

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the data written in the image display section (as analyzed above, refreshing of background image);

a partial-display-area refreshing section (same video generator 70) for refreshing data written in the partial display area (refreshing of foreground image as analyzed above).

However, De Lange does not teach using a partial screen memory for storing frame data for the partial display area. Moreover, De Lange does not teach a control section for causing predetermined single color data to be written, as a border line, on a border between the partial display area and the whole display area.

Nakamura teaches an image display control device. Specifically, Nakamura teaches a first storage means (memory) for storing whole image data and a second storage means (memory) for storing partial image data (page 1, paragraph 6). Moreover, because of this arrangement, it becomes possible to either display just the original whole image or a whole image with the partial image (page 1, paragraph 7).

Therefore, it would have been obvious to one of ordinary skill to modify De Lange's single frame memory to full screen memory and partial screen memory due to the advantageous option in controlling the presence of a partial image in a whole image. Consequently, as modified, De Lange's video generator 70 corresponds to claimed control section by reading individually from the full screen memory and the partial screen memory and writing into the display areas to which the data corresponds. Still, De Lange as modified by Nakamura does not teach the control section for causing

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predetermined single color data to be written, as a border line, on a border between the partial display area and the whole display area.

On the other hand, De Lange does teach using a predetermined mixing area is a border between the background and the foreground (fig. 1-2; column 6, lines 8-38). The only idea De Lange does not teach is that the border is of one predetermined single color.

Kraft teaches displaying of multiple application windows. Specifically, Kraft teaches that the border of a "focused" window having a changed color. See fig. 3 and column 4, lines 20-35. It is understood that inherently each window would have a different border color when it's not in focus. One of ordinary skill in the art would recognize that similarly De Lange's border could be a predetermined color, as a simple alternative.

Therefore, it would have been obvious to incorporate the choice of a predetermined border color between the partial display area and the whole display area, as a simple alternative to mixing colors between the background and the foreground. There are situations when a distinct border and when a subtle transition border are required, respectively.

As for claims 11-13 and 15-17, whether the color is white, black or a color different from that of the whole display area is determined based on user preference and whether the partial display area is to stand out.

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As for claim 14, the end product being a portable telephone with the display is functionally equivalent to other end products such as a TV and subsequently does not make it a novel feature.

Response to Arguments

4. Applicant's arguments, see pages 7-9, filed 10/10/2006, with respect to the rejection(s) of claim(s) 1-3, 5-8 and 10-17 under 35 U.S.C. 103 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of De Lange, Nakamura, Taku, and Kraft.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom V. Sheng whose telephone number is (571) 272-7684. The examiner can normally be reached on 9:00am - 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amr Awad can be reached on (571) 272-7764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Tom Sheng

AMR A. AWAD
SUPERVISORY PATENT EXAMINER
